

## Title (en)

LINEAR-ACTING CONTROLLABLE PNEUMATIC ACTUATOR AND MOTION CONTROL APPARATUS INCLUDING A FIELD RESPONSIVE MEDIUM AND CONTROL METHOD THEREFOR

## Title (de)

LINEARES, REGELBARES, PNEUMATISCHES BETÄTIGUNGSGLIED, UND BEWEGUNGS-REGELVORRICHTUNG MIT EINEM FELD-ANSPRECHENDEN MITTEL, UND REGELVERFAHREN FÜR DASSELBE

## Title (fr)

VERIN PNEUMATIQUE REGLABLE A COURSE LINEAIRE ET APPAREIL DE REGLAGE DU MOUVEMENT COMPRENANT UN SUPPORT REAGISSANT A UN CHAMP ET PROCEDE DE REGLAGE ASSOCIE

## Publication

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## Application

**EP 00916012 A 20000302**

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## Abstract (en)

[origin: WO0053937A1] The pneumatic actuator (23) has a housing (24) with a gas cavity (54), a first piston (26) slidably disposed in the gas cavity subdividing the gas cavity into first (31a) and second (31b) gas chambers, and an output member (25) coupled to the first piston. The linear-acting controllable brake (34) includes a medium containing cavity (53) subdivided into a first (52a) and second (52b) chambers, and a second piston (45) rigidly interconnected with, and longitudinally aligned with, the first piston. A passageway (46) interconnects the first and the second chambers and a field responsive medium (44) (e.g., a magnetic fluid) is contained in the passageway. A field generator (39) produces a field (43) to change a rheology of the medium and cause a braking force to be applied to the output member to control motion thereof. A preferable control method implements motion control based upon the kinetic energy and the braking force in the system.

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